ELSEVIER

Brain Research Bulletin, Vol. 40, Nos. 5/6, pp. III–XIII, 1996
Copyright © 1996 Elsevier Science Inc.
Printed in the USA. All rights reserved
0361-9230/95 $9.50 + .00

CONTENTS
VOLUME 40, 1996

CONTENTS VOLUME 40 NUMBER 1 1996

Review Articles

Parkinson's disease, trophic factors, and adrenal medullary chromaffin cell grafting: basic and clinical studies.
DATE, I. 1

Effects of lesions of different parts of the septo-hippocampal system in primates on learning and retention of information acquired before or after surgery.
RIDLEY, R. M., H. F. BAKER, J. A. HARDER and C. PEARSON 21

Articles

17β-Estradiol inhibits the production of dopamine by the tuberoinfundibular dopaminergic neurons of the male rat.
SHAW-BRUHA, C. M., H. K. HAPPE, L. C. MURRIN, J. F. RODRIGUEZ-SIERRA and J. D. SHULL 33

Changes of NADPH-diaphorase activity in the lumbosacral intermediolateral neurons of the rat after pelvic axotomy.
ANDO, A., T. DOMOTO, T. TSUMORI and Y. YASUI 37

Effects of acute and chronic cocaine administration on EEG and behaviour in intact and castrated male and intact and ovariectomized female rats.
VAN LUIJTELAAR, E. L. J. M., R. DIRKSEN, T. B. VREE and F. VAN HAAREN ... 43

Changes in serotonergic measures in whole blood and various brain regions of rats administered with the 5-HT_{1A} agonist tandospirone and/or exposed to electric foot-shock.
TAMADA, Y., T. URANO, J. MALYSZKO and A. TAKADA 51

Effects of MK-801 on spontaneous and amphetamine-stimulated dopamine release in striatum measured with in vivo microdialysis in awake rats.
MILLER, D. W. and E. D. ABERCROMBIE 57

The effect of ibogaine on *sigma*- and NMDA-receptor-mediated release of [^{3}H]dopamine.
SERSHEN, H., A. HASHIM and A. LAJTHA 63

CONTENTS VOLUME 40 NUMBER 2 1996

History of Neuroscience

The electrophysiological work of Carlo Matteucci.
MORUZZI, G. 69

Articles

Effects of lesions of amygdaloid nuclei and substantia nigra on aversive responses induced by electrical stimulation of the inferior colliculus.
MAISONNETTE, S. S., M. C. KAWASAKI, N. C. COIMBRA and M. L. BRANDÃO 93

Central opiate modulation of growth hormone and insulin-like growth factor-I.
HASHIGUCHI, Y., P. E. MOLINA, J. FAN, C. H. LANG and N. N. ABUMRAD ... 99

Gangliosides attenuate stress-induced changes on body weight, motor activity and on the behavioral response to 5-methoxy-*N,N*-dimethyltryptamine.
CANCELA, L. M., M. VOLOSIN and V. A. MOLINA 105

Extracellular catechol and indole turnover in the nucleus of the solitary tract of spontaneously hypertensive and Wistar–Kyoto normotensive rats in response to drug-induced changes in arterial blood pressure.
DEV, B. R. and L. PHILIP 111

The effects of prefrontal intracortical microinjections of an alpha-2 agonist, alpha-2 antagonist and lidocaine on the delayed alternation performance of aged rats.
TANILA, H., P. RÄMÄ and S. CARLSON 117

Association of dopaminergic terminals and neurons releasing nitric oxide in the rat striatum: An electron microscopic study using NADPH-diaphorase histochemistry and tyrosine hydroxylase immunohistochemistry.
FUJIYAMA, F. and S. MASUKO 121

State-dependent changes of brain endogenous opioids in mammalian hibernation.
CUI, Y., T. F. LEE and L. C. H. WANG 129

Effects of neurotensin on neurons in the rat central amygdaloid nucleus in vitro.
LU, Y.-F., A. MORIWAKI, Y. HAYASHI, K. TOMIZAWA, T. ITANO and H. MATSUI 135

Neuronal activity in monkey visual areas V1, V2, V4, and TEO during fixation task.
WATANABE, J. and E. IWAI 143

CONTENTS VOLUME 40 NUMBER 3 1996

Articles

Endotoxin administration induced differential neurochemical activation of the rat brain stem nuclei.
MOLINA–HOLGADO, F. and C. GUAZA 151

Effects of the $GABA_B$ antagonist CGP 35348 on sleep–wake states, behaviour, and spike–wave discharges in old rats.
PUIGCERVER, A., E. L. J. M. VAN LUIJTELAAR, W. H. I. M. DRINKENBURG and A. L. M. COENEN 157

Effects of glutamate receptor antagonists on posthypoxic myoclonus in rats.
JAW, S. P., B. NGUYEN, Q.-T. V. VUONG, T. A. TRINH, M. NGUYEN and D. D. TRUONG 163

Expression of the β1 and β2(AMOG) subunits of the Na,K-ATPase in neural tissues: Cellular and developmental distribution patterns.
LECUONA, E., S. LUQUÍN, J. AVILA, L. M. GARCÍA–SEGURA and P. MARTÍN–VASALLO 167

Activation of anterior lobe corticotrophs by electroacupuncture or noxious stimulation in the anaesthetized rat, as shown by colocalization of Fos protein with ACTH and β-endorphin and increased hormone release.
PAN, B., J. M. CASTRO-LOPES and A. COIMBRA 175

Inositol phosphate formation in mice prenatally exposed to drugs: Relation to muscarinic receptors and postreceptor effects.
ABU-ROUMI, M., M. E. NEWMAN and J. YANAI 183

Sexual dimorphism of $GABA_A$ receptor levels in subcortical brain regions of a woodland rodent *(Apodemus sylvaticus).*
CANONACO, M., R. TAVOLARO, R. M. FACCIOLO, A. CARELLI, M. CAGNIN and M. CRISTALDI 187

Median eminence corticotrophin-releasing hormone content following prenatal stress and neonatal handling.
SMYTHE, J. W., C. M. McCORMICK and M. J. MEANY 195

Inhibition of MK-801 of cocaine-induced sensitization, conditioned place preference, and dopamine-receptor supersensitivity in mice.
KIM, H.-S., W.-K. PARK, C.-G. JANG and S. OH 201

Morphologic analysis of rat retinocollicular neuron terminals containing monoamine oxidase.
NAKAJIMA, J., N. SAITO, K. KANI and T. MAEDA 209

Efferent projections of the retrorubral nucleus to the substantia nigra and ventral tegmental area in cats as shown by anterograde tracing.
ARTS, M. P. M., H. J. GROENEWEGEN, J. G. VEENING and A. R. COOLS 219

Ischemic tolerance to memory impairment associated with hippocampal neuronal damage after transient cerebral ischemia in rats.
OHNO, M. and S. WATANABE 229

What went wrong in BSE? From prion disease to public disaster.
BAKER, H. F. and R. M. RIDLEY 237

Branched connections to the septum and to the entorhinal cortex from the hippocampus, amygdala, and diencephalon in the rat.
CALDERAZZO, L., E. A. CAVALHEIRO, G. MACCHI, M. MOLINARI and M. BENTIVOGLIO 245

Reproductive experience increases striatal and hypothalamic dopamine levels in pregnant rats.
FELICIO, L. F., J. C. FLORIO, L. H. SIDER, P. E. CRUZ-CASALLAS and R. S. BRIDGES 253

Manganese toxicity in serumless dissociated mesencephalic and striatal primary culture.
DEFAZIO, G., L. SOLEO, R. ZEFFERINO and P. LIVREA 257

Mild hyperglycemia and insulin treatment in experimental cerebral ischemia in rats.
SUGIMORI, H., S. IBAYASHI, K. FUJII, T. NAGAO, S. SADOSHIMA and M. FUJISHIMA 263

Peripheral mononeuropathy affects hypothalamic and splenocyte beta-endorphin levels but not immune function in the rat.
BIANCHI, M., M. L. SOTGIU, B. MANFREDI and P. SACERDOTE 269

Magnetic resonance imaging of temporal changes of neurotoxic lesion in the rat.
JOHN, J., V. GOVINDARAJU, P. RAGHUNATHAN and V. M. KUMAR 273

The septointerpeduncular projection in the rat: Tracing with the carbocyanine dye dil.
VILLANI, L. 279

Blockade of N- and Q-type Ca^{2+} channels inhibit K^+ -evoked [^{3}H]acetylcholine release in rat hippocampal slices.
SAYDOFF, J. A., and R. ZACZEK 283

Vasoactive intestinal peptide and gastrin-releasing peptide play distinct roles in the suprachiasmatic nucleus.
ISOBE, Y. and H. NISHINO 287

CONTENTS VOLUME 40 NUMBERS 5/6 1996

Special Issue: Spatial Orientation

Workshop on Spatial Orientation, Ibiza, May 1995.
M. A. GRESTY 291

VESTIBULAR AND NEURAL CONTROL OF EYE MOVEMENT AND VISUAL DIRECTION

Animal Studies

Behavior and physiology of the macaque vestibulo-ocular reflex response to sudden off-axis rotation: Computing eye translation.
L. H. SNYDER and W. M. KING 293

Commentary
C. GIANNA 302

Vestibulo-ocular reflex of the squirrel monkey during eccentric rotation with centripetal acceleration along the naso-occipital axis.
D. M. MERFELD 303

Human Studies

Transaural linear vestibulo-ocular reflexes from a single utricle.
T. LEMPERT, C. GIANNA, G. BROOKES, A. M. BRONSTEIN and M. A. GRESTY 311

Three-dimensional orientation of the eye rotation axis during the Purkinje sensation.
M. FETTER 315

Commentaries
D. M. MERFELD 318
M. FETTER 319

Saccular impact on ocular torsion.
B. DE GRAAF, J. E. BOS and E. GROEN 321

Commentaries
D. M. MERFELD 326
B. DE GRAAF, J. BOS and E. GROEN 327
M. GRESTY 329
K. JAUREGUI–RENAUD 329
B. DE GRAAF 330

Ocular torsion before and after 1 hour centrifugation.
E. GROEN, B. DE GRAAF, W. BLES and J. E. BOS 331

Commentaries
F. GUEDRY 334
E. GROEN 334

Theoretical Studies

Neural network simulations of the primate oculomotor system. II. Frames of reference.
A. K. MOSCHOVAKIS 337

Commentaries
C. HARRIS 344
A. K. MOSCHOVAKIS 344

DEVELOPMENTAL AND SUBSTRATAL STUDIES

NMDA receptors of the vestibular nuclei neurones.
P. P. VIDAL, A. BABALIAN, C. DE WAELE, M. SERAFIN, N. VIBERT and M. MÜHLETHALER 347

Otoconial alterations after embryonic development in hypergravity.
H. N. P. M. SONDAG, H. A. A. DE JONG, J. VAN MARLE, B. WILLEKENS and W. J. OOSTERVELD 353

Commentaries
P. P. VIDAL 357
E. SONDAG 357

Influence of visual signals on the coordination of spontaneous eye and head movements in infant rabbits.
H. TEGETMEYER 359

Commentaries
J. S. TAUBE 362
H. TEGETMEYER 363

Delayed visual maturation in infants: A disorder of figure–ground separation?
C. M. HARRIS, A. KRISS, F. SHAWKAT, D. TAYLOR and I. RUSSELL–EGGITT 365

Head coordination in the sagittal plant in toddlers during walking: Preliminary results.
A. LEDEBT and S. WIENER–VACHER 371

ESTIMATING SUBJECTIVE AND VISUAL ORIENTATION TO VERTICAL

The subjective visual horizontal for different body tilts in the roll plane: Characterization of normal subjects.
A. TRIBUKAIT, J. BERGENIUS and K. BRANTBERG 375

Commentaries
H. MITTELSTAEDT 381
A. TRIBUKAIT 382
H. MITTELSTAEDT 383

The subjective horizontal at different angles of roll-tilt in patients with unilateral vestibular impairment.
J. BERGENIUS, A. TRIBUKAIT and K. BRANTBERG 385

Commentaries
T. LEMPERT 390
J. BERGENIUS 391

Perceived body position and the visual horizontal.
F. MAST and T. JARCHOW 393

Commentaries
H. MITTELSTAEDT 397
F. MAST 397
H. MITTELSTAEDT 398

The role of ocular torsion in visual measures of vestibular function.
I. S. CURTHOYS 399

Commentaries
B. DE GRAAF and H. GROEN 403
P. RIORDAN–EVA 404
I. CURTHOYS 404

The delay of the oculogravic illusion.
I. S. CURTHOYS 407

Commentaries
S. GLASAUER 410
I. CURTHOYS 411

Subjective postural vertical inferred from vestibular optokinetic vs. proprioceptive cues.
A. BISDORFF, A. BRONSTEIN, M. GRESTY and C. WOLSLEY 413

Shift of subjective reference and visual orientation during slow pitch tilt for the seated human subject.
Y. ITO and M. A. GRESTY 417

Clinical Applications

Can a unilateral loss of otolithic function be clinically detected by assessment of the subjective visual vertical?
A. BÖHMER, F. MAST and T. JARCHOW 423

Commentaries
P. RIORDAN–EVA 427
I. CURTHOYS 427
A. BÖHMER 428

POSTURAL CONTROL

Control of the body vertical by vestibular and proprioceptive inputs.
F. HLAVACKA, T. MERGNER and M. KRIZKOVA 431

Commentaries
B. AMBLARD 434
F. HLAVACKA 435

The effect of eye/head deviation and visual conflict on visually evoked postural responses.
C. J. WOLSLEY, D. BUCKWELL, V. SAKELLARI and A. M. BRONSTEIN 437

Commentaries
B. L. DAY 441
C. WOLSLEY 441

MOTION PERCEPTION

Thresholds for detection of motion direction during passive lateral whole-body acceleration in normal subjects and patients with bilateral loss of labyrinthine function.
C. GIANNA, S. HEIMBRAND and M. GRESTY 443

Commentaries
S. GLASAUER 448
L. R. YOUNG 449

Detection thresholds for object motion and self-motion during vestibular and visuo-oculomotor stimulation.
O. KOLEV, T. MERGNER, H. KIMMIG and W. BECKER 451

Commentaries
A. B. MORLAND 457
T. MERGNER 458

Object motion perception during ego-motion: Patients with a complete loss of vestibular function vs. normals.
B. S. MESLAND, A. L. FINLAY, A. H. WERTHEIM, G. R. BARNES, A. B. MORLAND, A. M. BRONSTEIN and M. A. GRESTY 459

Commmentary
M. A. GRESTY 465

Is perceived angular displacement the time integral of perceived angular velocity?
T. MERGNER, A. RUMBERGER and W. BECKER 467

Commentaries
F. A. M. VAN DER STEEN 470
T. MERGNER 471

Simulating self-motion.
F. A. M. VAN DER STEEN 473

Commentary
J. KOENDERINK 475

ORIENTATION AND NAVIGATION

Processing the head direction cell signal: A review and commentary.
J. S. TAUBE, J. P. GOODRIDGE, E. J. GOLOB, P. A. DUDCHENKO and R. W. STACKMAN 477

Commentaries
J. J. KNIERIM and B. L. MCNAUGHTON 484
J. S. TAUBE, et al. 485

Space and the hippocampal formation in humans.
R. G. MORRIS, A. PICKERING, S. ABRAHAMS and J. D. FEIGENBAUM 487

Commentaries
J. S. TAUBE 490
R. G. MORRIS 490

Quantitative analysis of human walking trajectory on circular path in darkness.
Y. TAKEI, R. GRASSO and A. BERTHOZ 491

Commentaries
M. A. GRESTY 495
Y. TAKEI 496

When is a view unusual? A single case study of orientation-dependent visual agnosia.
O. H. TURNBULL and R. A. McCARTHY 497

Discussion
G. W. HUMPHREYS and O. TURNBULL 502

OVERVIEW

Spatial orientation perception and reflexive eye movements—A perspective, an overview, and some clinical implications.
F. E. GUEDRY 505

Volume 40 List of Contents, Author Index, and Keyword Index I

ERRATUM

JAW, S. P., B. NGUYEN, Q.-T. V. VUONG, T. A. TRINH, M. NGUYEN and D. D. TRUONG. Effects of glutamate receptor antagonists on posthypoxic myoclonus in rats. BRAIN RESEARCH BULLETIN 40(3):163–166; 1996 viii